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Executive Summary

This document presents the work plan for the Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI)/Remedial Investigation (RI) for Operable Unit No. 7 (OU7) at the Rocky Flats Plant in Jefferson County, Colorado

The RFI/RI investigation is pursuant to an Interagency Agreement (IAG) among the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the State of Colorado Department of Health (CDH) dated January 22, 1991 (U.S DOE, 1991a). The IAG program developed by DOE, EPA, and CDH addresses RCRA and CERCLA issues and has been integrated with the ER Program. Although the IAG requires general compliance with both RCRA and CERCLA, RCRA regulations apply to remedial investigations at OU7.

As required by the IAG, this Phase I work plan addresses characterization of source materials and soils at OU7. A subsequent Phase II RFI/RI will investigate the nature and extent of surface water, groundwater, and air contamination and evaluate potential contaminant migration pathways. This Phase I work plan addresses characterization of source materials and soil including (1) landfill waste and leachate at the Present Landfill (IHSS 114), (2) soils beneath the landfill potentially contaminated with leachate, (3) sediments and water in the East Landfill Pond, (4) potentially contaminated soils at the Inactive Hazardous Waste Storage Area (IHSS 203), and (5) potentially contaminated soils in the vicinity of the East Landfill Pond that were not included in Operable Unit No. 6 (OU6) but where spray evaporation has historically occurred.

The initial step in the development of OU7 work plan was a review of the existing information Available historical and background data were collected through a literature search and a review of the Rocky Flats Environmental Database System (RFEDS). This information was used to characterize the physical setting and contamination at OU7 and to develop a conceptual model of the site.

Based on this characterization of OU7, data quality objectives (DQOs) have been developed for the Phase I RFI/RI investigation DQOs are qualitative and quantitative statements that describe the quality and quantity of data required by the RFI/RI Through application of the DQO process, site-specific RFI/RI goals are established and data needs are identified for achieving these goals

In accordance with the IAG, the goals identified for the Phase I RFI/RI for OU7 include characterization of the physical features of the sources at the site and a definition of the contaminant sources within OU7.

Within these two broad goals, site-specific objectives and data needs have been identified for the Phase I RFI/RI for OU7. The FSP presented in this work plan is designed to obtain the data needed to meet the site-specific objectives. Based on the amount and reliability of existing information, the sampling/analysis activities specified in the FSP for each area of concern within OU7 require a combination of some or all of the following: screening activities, soil-gas sampling, soil sampling, sediment sampling, surface water sampling, and monitoring well installation and sampling. Site-specific sampling activities are briefly summarized below.

IHSS 114 - Present Landfill: Cone penetrometer testing coupled with in-situ sampling of gas/leachate/groundwater will be performed at 38 locations. Eight boreholes will be drilled into weathered bedrock, three boreholes will be drilled into unweathered bedrock. Pump-in borehole packer tests will be performed in the weathered and unweathered bedrock. Groundwater monitoring wells will be installed and sampled at 15 locations. Leachate, surface water, and sediment samples will be collected from the East Landfill Pond. The operation of the groundwater intercept system will be evaluated, the discharge points identified, and samples obtained from the discharge points. All sample points, borings, and wells will be surveyed using standard land surveying techniques

IHSS 203 - Inactive Hazardous Waste Storage Area: A radiological survey will be

conducted at 35 locations A total of 58 soil samples will be collected to a depth of 10 inches. A total of 58 soil samples will be collected from depths of 10 to 12 inches for field analysis of soil-gas constituents All sampled locations will be surveyed using standard land surveying techniques

Areas Around the East Landfill Pond: A radiological survey will be conducted at 96 locations. A total of 122 soil samples will be collected to a depth of 10 inches. All sampled locations will be surveyed using standard land surveying techniques

Data collected during the Phase I OU7 RFI/RI will be incorporated into the existing RFEDS data base. These data will be used to better define site characteristics, source characteristics; to support the baseline risk assessment; and to evaluate potential remedial alternatives. An RFI/RI report will be prepared to summarize the data obtained during the Phase I program This report will also include the Phase I Baseline Human Health Risk Assessment and Environmental Evaluation